

A photograph of a modern clothing store interior. In the foreground, several racks of clothes are visible, including a white V-neck t-shirt and a red top. In the background, two mannequins are dressed in suits, one in a dark blue suit and the other in a light-colored suit. The store has a clean, minimalist design with white walls and a dark floor. The TRASSIR logo is overlaid in the top left corner.

TRASSIR[®]

Transforming Retail Security with AI-Driven Innovation

About TRASSIR



Founded in 2002, TRASSIR is a leading international developer of **AI-powered video surveillance, security systems, IoT solutions, and proprietary software**. Our in-house designed solutions redefine security and automation, ensuring seamless integration, efficiency, and cost-effective results.

With a strong focus on the retail sector, TRASSIR's **open AIoT platform** empowers businesses to enhance loss prevention, optimize operations, and improve customer experiences. Our intelligent machine perception and predictive analytics help retailers reduce shrinkage, streamline workflows, and increase profitability.

Solutions for:



Cashier
Transactions
Control



Weighing
Operations



Face
Recognition



Warehouse
Monitoring



People Flow
Analyzes



Objects
Counting



Queue
Detection



Personal
Protection
Equipment

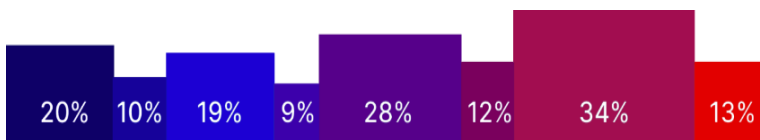


Perimeter
Control

Enhance retail security & efficiency

- ✓ **Reduce Theft & Shrinkage**
Advanced AI-driven surveillance helps prevent shoplifting and internal fraud.
- ✓ **Enhance Visitor & Staff Safety**
Create a secure shopping environment with real-time threat detection and incident prevention.
- ✓ **Seamless Security & Loss Prevention**
Integrated solutions that deter threats, improve response times, and enhance overall retail security.
- ✓ **Protect Assets & Prevent Tampering**
Ensure the security of inventory, cash registers, and sensitive areas with intelligent monitoring.
- ✓ **Prevent Staff Fraud & Policy Violations**
Monitor transactions, inventory handling, and staff behavior to minimize internal risks.

Common causes of retail losses



- Receipt fraud
- Theft from cash register
- Cash fraud
- Forgery of payments
- Theft of money in collusion with management
- Forgery of financial statements
- Forgery of cashless transactions
- Theft of customer bank card information

Areas where our solutions can help

Cash desk area

- Cashier fraud prevention
- Staff errors minimization
- Cash discipline control
- Reputation losses reduction
- Queue management
- Cashier schedules optimization
- Outlet capacity increase

Warehouse

- Theft and damage of goods prevention
- Warehouse supervision operations
- Staff supervision
- Working hours tracking

Parking and unloading area

- Car access control arrangements
- Parking space counting
- Special vehicle operating procedures control

Trading floor

- Display supervision
- Staff supervision
- Marketing analytics acquisition
- Theft prevention
- People flow behaviour analysis
- Data collection for merchandising planning
- Compliance monitoring in a pandemic management
- Ensuring safety

Entrance

- Conversion counting
- Unique and repeat people flow counting
- Target audience defining

Office

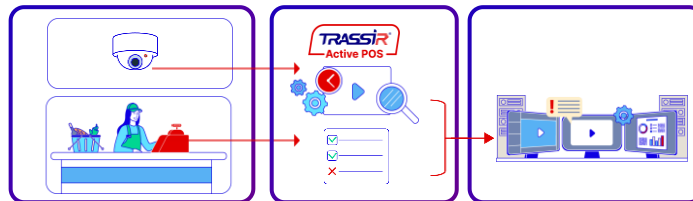
- Reports collection
- Automated equipment performance diagnostics
- Single control center



Solution for Cashier Transactions Control (ActivePOS)

Quickly and efficiently gather evidence of checkout errors and theft while receiving detailed reports on financial losses.

- Cash register operations and weight control are seamlessly synchronized with the video stream
- Search and filter operations by specific parameters
- Display alarm events for operator attention
- Review recorded actions
- Generate detailed reports



Solution for Weighing Operations (ActivePOS Weight)

Automatically ensure that all weighed goods are properly processed at checkout.

- The solution tracks goods that did not pass through the checkout and allows reviewing the exact moment they were weighed
- The application generates detailed reports, including product name, weighing terminal and weight, checkout terminal with receipt price and weight, video archive links, weighing time, and checkout scanning time



Solution for Face Recognition (Face Recognition)

Preemptively identify individuals with a history of theft upon entering the retail area and take timely action.

- After an initial theft, the individual's face is captured from camera footage and added to the blacklist in the TRASSIR system
- If the person enters any location within the retail network, employees receive an instant alert
- Security personnel closely monitor the individual and take appropriate action if another theft attempt occurs



Solution for Warehouse Monitoring (ActiveStock)

A warehouse analytics system providing smart search for all stages of goods handling and fast video evidence to investigate warehouse loss incidents.

- Quick and convenient search by events, goods, or employees
- Categorization of video by warehouse action scenarios
- Online viewing and archive search
- Unified interface for working with video and warehouse operations from WMS
- Easy integration with WMS via API
- One or more cameras can be used for an object or surveillance area



Solution for People Flow Analyzes (Heat Map on Map)

Multi-camera customer flow heat map for retail space analysis.

- Visualize traffic intensity and direction on an interactive dashboard
- Gather marketing and statistical data on customer behavior
- Optimize product placement and store layout

- Retail space management
- Checking stock conversions



Solution for Queue Detection (Queue Detector)

- High accuracy > 99%
- Boost customer loyalty and repeat purchases
- Optimize cashier schedules
- Increase store capacity
- Maintain detailed statistical records

9% increase the number of transactions per cash register

2 times reduction in customer complaints and minimize queues

by 10% reduction in refusal rates



Solution for Objects Counting (Neuro Counter)

- Unique object counting powered by a neural network
- Excludes employee detection for accurate data
- Analyze and estimate customer traffic flow
- Track conversions to sales
- Measure the effectiveness of marketing promotions
- Conduct displacement analysis

+99.9% counting accuracy

16 zones crossings to count visitors in the frame



Solutions for Personal Protection Equipment and Perimeter Control (Wear and Hard Hat Detector and Neuro Detector)

- Detects and classifies individuals based on uniform color
- Generate detailed reports
- Monitor compliance with safety and sanitary standards
- Monitor staff visits to designated areas at specified intervals

SPAR supermarkets

A wide network of outlets that have service areas with their own kitchen. The network is actively expanding, opening new facilities.

OBJECTIVES

- Reduce losses due to theft in stores
- Implement fraud prevention measures at cash registers
- Supervise the self-weighing process in self-service areas

SOLUTIONS



TRASSIR
ActivePOS



2 NeuroStation
servers

Over the course of a month, a comprehensive security system was deployed, including Face Recognition, Active POS monitoring, weight data control, and specialized recorders for video analytics. These solutions delivered significant improvements:

- Automated cash counting during cashier shift closures, reducing cash shortages by 30%
- Enhanced weight data control, ensuring accurate self-weighing of goods in self-service areas
- 40% decrease in theft-related losses due to advanced surveillance and fraud detection
- 60% reduction in theft risk, thanks to real-time identification and monitoring with Face Recognition

30% reduced inadequacies **40%** reduced theft losses **60%** reduced theft risk



Özdilek supermarket

An ÖZDİLEK supermarket is the largest retailer in Turkey. Operating for 40 years, it combines 14 shopping centers, 7 supermarkets, 8 department stores, and more than 100 home textile stores.

OBJECTIVES

- A primary goal set by this retailer for software developers has been to minimize store losses caused by theft and human error

SOLUTIONS

- TRASSIR UltraStation
- Integration with existing ACS
- TRASSIR ActivePOS - automatically detects violations and immediately sends notifications to employees responsible for the site
- Facial recognition technology
- TRASSIR IP cameras
- Minimizes manual operations and increases security levels at the facility



Nationwide Retail Chain

With 17000 stores across 2,900 locations, this major retail chain operates 12,500 convenience stores, 250+ hypermarkets, 200+ supermarkets, and 4,000 drugstores. With a workforce exceeding 270,000 employees, ensuring security, scalability, and operational efficiency is a top priority.

OBJECTIVES

- Implement a solution by a trusted national developer
- Ensure scalability for thousands of retail locations
- Achieve hardware fault tolerance for uninterrupted operations
- Provide warranty, service, and technical support
- Develop a flexible, client-oriented system tailored to specific needs



SOLUTIONS



TRASSIR
ActivePOS



TRASSIR
CMS

To meet the retailer's large-scale security demands, TRASSIR private cloud was deployed based on TRASSIR Central Monitoring Station (CMS) solution, offering seamless integration across the entire network. Currently, 10,000 servers operate simultaneously, ensuring reliable, real-time surveillance. This large-scale implementation positions the system as one of the most extensive cloud-based video surveillance networks, rigorously tested in real-world conditions. By leveraging TRASSIR's advanced infrastructure, the retailer benefits from a highly scalable, fault-tolerant, and customizable security system, ensuring comprehensive protection across thousands of locations.

TRASSIR retail projects

2000+ stores



10K+

neuroanalytics
modules installed
in retail

99,9%

hardware compatible
with the TRASSIR
ecosystem

95%

customers implement
video analytics after
pilot project

TRASSIR®



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